# Application Development with LLMs on Google Cloud

**Category:** AI, Data & Analytics | **Vendor:** Google Cloud

**Duration:** 8.00 hours (1 days) **6.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

## Course Information

**Delivery Format:** Instructor Led - Online

## Course Overview

In this course, you'll dive into the details of using Large Language Models (LLMs) in your applications. You'll start by exploring the core principles that underpin prompting LLMs. Next, you will focus on Google's latest family of models, Gemini. You'll explore the various Gemini models and their multimodal capabilities. This includes a deep dive into effective prompt design and engineering within the Vertex AI Studio environment. Then, the course moves to application development frameworks and how to implement these concepts into your applications.

## About This Course

In this course, you'll dive into the details of using Large Language Models (LLMs) in your applications. You'll start by exploring the core principles that underpin prompting LLMs. Next, you will focus on Google's latest family of models, Gemini. You'll explore the various Gemini models and their multimodal capabilities. This includes a deep dive into effective prompt design and engineering within the Vertex AI Studio environment. Then, the course moves to application development frameworks and how to implement these concepts into your applications.

## Who Should Attend

Application developers and others who wish to leverage LLMs in applications.

### Prerequisites & Entry Requirements

**General Prerequisites:**

Completion of Introduction to Developer Efficiency on Google Cloud (IDEGC) or equivalent knowledge.

## Learning Outcomes

**Upon successful completion of this course, participants will be able to:**

- Explore the different options available for using generative AI on Google Cloud.
- Use Vertex AI Studio to test prompts for large language models.
- Develop LLM-powered applications using generative AI
- Apply advanced prompt engineering techniques to improve the output from LLMs
- Build a multi-turn chat application using the Gemini API and LangChain

## Detailed Course Outline

Module 1 - Introduction to Generative AI on Google Cloud

Topics:

- What is generative AI
- Vertex AI on Google Cloud
- Generative AI options on Google Cloud
- Introduction to course use case

Module 2 - Vertex AI Studio

Topics:

- Introduction to Vertex AI Studio
- Designing and testing prompts

- Data governance in Vertex AI Studio

Activities:

- Lab: Getting Started with the Vertex AI Studio User Interface

Module 3 - Generative AI Fundamentals

Topics:

- Introduction to grounding
- Integrating the Vertex AI Gemini APIs
- Chat, memory and grounding
- Search principles

Activities:

- Lab: Getting Started with LangChain + Vertex AI Gemini API

Module 4 - Prompt Engineering

Topics:

- Review of few-shot prompting
- Chain-of-thought prompting and thinking budgets
- Meta prompting, multi-step, and panel prompts

- RAG and ReAct

Activities:

- Lab: Advanced Prompt Architectures

Module 5 - Creating Custom Chat Applications with Vertex AI Gemini API

Topics:

- LangChain for chatbots
- ADK for chatbots
- Chat retrieval

Activities:

- Lab: Implementing RAG Using LangChain, Introduction to Generative AI on Google Cloud, Vertex AI Studio, LangChain Fundamentals, Prompt Engineering, Creating Custom Chat Applications with Vertex AI PaLM API

**Skills You Will Learn:**

- Explore the different options available for using generative AI on Google Cloud.<br>- Use Vertex AI Studio to test prompts for large language models.<br>- Develop LLM-powered applications using generative AI<br>- Apply advanced prompt engineering techniques to improve the output from LLMs<br>- Build a multi-turn chat application using the Gemini API and LangChain

# Frequently Asked Questions

### Q: What delivery options are available for Application Development with LLMs on Google Cloud?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

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### Q: How many CPD hours does this course provide?

The 1-day Application Development with LLMs on Google Cloud course provides up to 6.5 CPD hours of structured learning. CPD certificates can be provided upon request.

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### Q: What is the duration of the Application Development with LLMs on Google Cloud training?

The training takes place over 1 day(s), with each day lasting approximately 8.00 hours including breaks for lunch and refreshments.

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### Q: Do you provide corporate training for Application Development with LLMs on Google Cloud?

Yes, we provide corporate training, dedicated training, and closed classes for Application Development with LLMs on Google Cloud. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

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### Q: What related terms do people search for?

Popular related searches include: Application Development with LLMs on Google Cloud, AI & Data Science, ADLGC, Google Cloud, vILT

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### Q: Why choose Nexus Human for Application Development with LLMs on Google Cloud?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

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### Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Application Development with LLMs on Google Cloud training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.


## Nexus Human

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